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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,337	05/23/2006	**Reinhold Braam**	2003P15404WOUS	3216

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EXAMINER	
SARWAR, BABAR	

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/580,337	BRAAM ET AL.	
	Examiner	Art Unit	
	BABAR SARWAR	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/26/2009 has been entered.

2. **Claims 1-18** have been cancelled.

3. **Claims 19-34** are currently pending.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elizabeth et al. ("A Review of Current Routing Protocols for Ad Hoc Mobile Wireless Networks" IEEE, April 1999) in view of Mohan R. Duggi (US 2005/0041627 A1), hereinafter referenced as Eli and Duggi.

Consider **claims 19, 25**, Eli discloses a method for establishing a connection between a service requester device and a service provider device in a decentralized mobile wireless network **(Figs. 3a-b, 4a-b, where Eli discloses a source node,**

intermediate nodes and a destination node in an Ad-Hoc mobile wireless network, therefore establishing a connection in a decentralized mobile wireless network) comprising a plurality of Internet Protocol (IP) routers, each router comprising a routing table **(Figs. 3, 4, where Eli discloses nodes with their routing tables, therefore a plurality of Internet Protocol (IP) routers)**, the method comprising: the service requester device sending a service discovery request message towards a service provider device via the plurality of IP routers **(Page 49: Fig. 4a-b where Eli discloses broadcasting a route request packet, and updating the routing tables, therefore sending a service discovery request)**; receiving the service discovery request message by each router; each router adding routing information pertaining to the received service discovery request message in the routing table of that router **(Page 49: Fig. 4a-b where Eli discloses broadcasting a route request packet, and updating the routing tables, therefore receiving a service discovery request)**; receiving the service discovery request message by the service provider device; the service provider device responding to the received service discovery request message with a service discovery reply message to the service requester device **(Page 49: Fig. 4a-b where Eli discloses generation of a route reply, therefore responding to a service discovery request)**; and at least a portion of the plurality of IP routers adding routing information of the received service discovery reply message to the routing table **(Page 49: Fig. 4a-b where Eli discloses placing the route record contained in the route request into the route reply, therefore adding routing information to the routing table)**.

Eli discloses that the destination node places the route record contained in the route request into the route reply. If the responding node is an intermediate node, it will append its cached route to the route record and then generate the route reply. However, Eli does not explicitly disclose at least a portion of the plurality of IP routers adding routing information of the received service discovery reply message to the routing table. Duggi discloses at least a portion of the plurality of IP routers adding routing information of the received service discovery reply message to the routing table **(Para 0050, Fig. 3, where Duggi discloses intermediate nodes appending their own IP addresses to the Path Marker Reply Messages and then relaying the messages across the next hop in the route to the source node, therefore at least a portion of the plurality of IP routers adding routing information to the routing table)**. Therefore, It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Eli with the teachings of Duggi so as to obtain the complete path information of active routes as discussed in **Para 0017**.

Consider **claim 20**, the combination teaches everything claimed as implemented above (see claim 19). In addition, Eli discloses wherein the service discovery request message is comprised of at least one element of a route request **(Page 49: Fig. 4a-b where Eli discloses broadcasting a route request packet, and updating the routing tables, therefore at least one element of a route request)**.

Consider **claim 21**, the combination teaches everything claimed as implemented above (see claim 19). In addition, Eli discloses wherein the service discovery reply message is comprised of a route reply incorporating all information elements of the

route reply **(Page 49: Fig. 4a-b where Eli discloses placing the route record contained in the route request into the route reply, therefore incorporating all information elements of the route reply)**.

Consider **claim 22**, the combination teaches everything claimed as implemented above (see claim 19). In addition, Eli discloses wherein the service discovery request and service discovery reply messages are in accordance with an Ad hoc On Demand Distance Vector Routing Protocol or a Dynamic Source Routing Protocol for Mobile Ad hoc Networks **(Page: 48, Para 5, Figs. 3a-b, 4a-b, where Eli discloses an A-Hoc on Demand Distance Vector Routing Protocol)**.

Consider **claim 23**, the combination teaches everything claimed as implemented above (see claim 22). In addition, Eli discloses wherein the Ad Hoc On Demand Distance Vector Routing Protocol or the Dynamic Source Routing Protocol of the request message and the reply message is extended such that the routing table of a router is updated with routing information after the router receives the service discovery request message or the service discovery reply message **(Figs. 3a-b, 4a-b, where Eli discloses updating of the routing tables)**.

Consider **claim 24**, the combination teaches everything claimed as implemented above (see claim 19). In addition, Duggi discloses wherein the service requester device is a client and the service provider device is a server and wherein each router of the at least a portion of the plurality of IP routers adds routing information of the received service discovery reply message to the routing table of that router such that the a route is traceable from the service requester to the service provider **(Para 0050, Fig. 3,**

where Duggi discloses intermediate nodes appending their own IP addresses to the Path Marker Reply Messages and then relaying the messages across the next hop in the route to the source node, therefore at least a portion of the plurality of IP routers adding routing information of the received service discovery reply message to the routing table).

Consider **claim 26**, the combination teaches everything claimed as implemented above (see claim 25). In addition, Eli discloses wherein the service discovery request message is comprised of an indicator indicating to the routers that the routers should add routing information pertaining to the received service discovery request message to the routing tables of the routers **(Figs. 3a-b, 4a-b, where Eli discloses intermediate nodes adding/updating their routing tables by setting up forward node entries)**.

Consider **claim 27**, the combination teaches everything claimed as implemented above (see claim 25). In addition, Duggi discloses wherein the service discovery reply message is comprised of an indicator indicating to the routers that receive the service discovery reply message that routing information pertaining to the received service discovery reply message should be added to the routing tables of the routers **(Para 0050, Fig. 3, where Duggi discloses intermediate nodes appending their own IP addresses to the Path Marker Reply Messages and then relaying the messages across the next hop in the route to the source node)**.

Claim 28, as analyzed with respect to the limitations as discussed in claim 22.

Consider **claim 29**, the combination teaches everything claimed as implemented above (see claim 25). In addition, Eli discloses wherein the service provider is a server

and the service requester is a client **(Figs. 3a-b, 4a-b, where Eli discloses the source nodes and the destination nodes)**.

Consider **claim 30**, Eli discloses a decentralized mobile wireless network system **(Figs. 3a-b, 4a-b, where Eli discloses a source node, intermediate nodes and a destination node in an Ad-Hoc mobile wireless network, therefore a decentralized mobile wireless network system)**, comprising: a network service available to a service requester **(Figs. 3a-b, 4a-b elements N1-N8, where Eli discloses source node, intermediate nodes and destination node, therefore network service that is available to a service requester .i.e. the source node)**; a plurality of Internet Protocol (IP) routers each having a routing table **(Figs. 3a-b, 4a-b, where Eli discloses nodes with their routing tables)**; the service requester configured to transmit a service discovery request comprised of a first routing indicator and information pertaining to a desired service **(Page 48: Para 6, Figs. 3a-b, 4a-b, where Eli discloses initiation of path discovery process (RREQ), therefore a first routing indicator)**, wherein the service discovery request message is multicasted from the service requester, and wherein each router receives the service discovery request message and updates the routing table of that router with routing information pertaining to the received service discovery request message **(Page 48: Para 8, Figs. 3a-b, 4a-b, where Eli discloses multicasting the network with RREQ, and updating the routing tables, therefore multicasting/broadcasting service discovery request message)**; a plurality of service providers configured to receive the service discovery request message from the service requester **(Figs. 3a-b, 4a-b, where Eli discloses the source nodes, the**

intermediate nodes and the destination nodes), each service provider configured to transmit a service discovery reply comprised of a second routing indicator **(Figs. 3a-b, 4a-b, where Eli discloses destination node responding by a route reply, therefore second routing indicator),** each service provider configured to transmit a service discovery reply message to the service requester if that service provider determines that the service provider provides a service identified in the service discovery request message **(Page 49: Fig. 4a-b where Eli discloses generation of a route reply, therefore determining)**, each service provider configured to send the service discovery reply message such that the network is not flooded with the service discovery reply message **(Page 49: Fig. 4a-b where Eli discloses placing the route record contained in the route request into the route reply, therefore not flooding)**, and wherein the service requester is configured to receive the service discovery reply message such that a connection between the service requester and the service provider providing the service identified in the service discovery request message is established in the network **(Page 49: Fig. 4a-b where Eli discloses placing the route record contained in the route request into the route reply, therefore establishing)**. Eli discloses that the destination node places the route record contained in the route request into the route reply. If the responding node is an intermediate node, it will append its cached route to the route record and then generate the route reply. However, Eli does not specifically disclose wherein at least a portion of the plurality of IP routers is configured to receive the service discovery reply message and update the routing tables of the IP routers with information pertaining to the received service discovery

reply message. Duggi discloses wherein at least a portion of the plurality of IP routers is configured to receive the service discovery reply message and update the routing tables of the IP routers with information pertaining to the received service discovery reply message **(Para 0050, Fig. 3, where Duggi discloses intermediate nodes appending their own IP addresses to the Path Marker Reply Messages and then relaying the messages across the next hop in the route to the source node, therefore at least a portion of the plurality of IP routers adding routing information to the routing table)**. Therefore, It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Eli with the teachings of Duggi so as to obtain the complete path information of active routes as discussed in **Para 0017**.

Consider **claim 31**, the combination teaches everything claimed as implemented above (see claim 30). In addition, Eli discloses wherein the portion of the routers is determined via a route determined from multicasting the service discovery request message and wherein the service requester is a client and each service provider is a server **(Figs. 3a-b, 4a-b, where Eli discloses the route discovery packet and a plurality of nodes)**.

Claim 32, as analyzed with respect to the limitations as discussed in claim 22.

Claim 33, as analyzed with respect to the limitations as discussed in claim 20.

Consider **claim 34**, the combination teaches everything claimed as implemented above (see claim 30). In addition, Eli discloses wherein the service discovery reply message is comprised of a route reply **(Figs. 4a-b, where Eli discloses the route reply)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 09:00 A.M -05:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BS/

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Examiner, Art Unit 2617

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